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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER				
JEN, MINJEN				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary****Application No.**

10/517,145

**Applicant(s)**

RYEGARD ET AL.

**Examiner**

IAN JEN

**Art Unit**

3664

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 June 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 15, 23, 24 and 28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 15, 23, 24 and 28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
- Paper No(s)/Mail Date 12/07/2004.
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Response to Amendment***

2. This action is response to the communication filed on June 4<sup>th</sup>, 2008
3. Claims 15, 23, 24, 26-28 are pending in this action.
4. Claims 1- 14, 16-22, 25 have been cancelled.
5. Claims 23, 24, 28 have been newly amended.

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 15,23,24,28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stoddard et al (US Pat No 6697681) in view of Ikeda et al (US Pat No 6522949).

As per claim 15, Stoddard et al shows the control system wherein drive unit comprise one or more drives (Fig 1, Fig 2; Col 4, lines 10-67).

As per claim 23, Stoddard et al shows a control system for controlling the movements of at least two manipulators ( Abstract, Fig 1 ; Col 1, lines 10 -46 where the manual motion of the robot is driven by electrical motor and computer program drive means ), the control system comprising: a main computer module configured to execute programs with instructions for movements of the at least two manipulators ( Fig 1, controller 56, 66, remote workstation 80 ; Col 3, lines 24-37; Col 4, lines 40- 30 ), the main computer module further comprising a power supply configured to supply power to the main computer module ( Fig 1, Col 4, lines 10 - 33; Col 4, lines 40- 46 ); a drive module for each of the at least two manipulators ( Col 2, lines 22 – 40; Col 3, lines 25 – Col 4, lines 35, Controller 30, Portable Operating Unit 10 for each manipulator), each drive module being physically separate from each other and from the main computer module each drive module comprising a drive unit that controls motors driving the movements of one of the at least two manipulators ( Fig 1, Col 3, lines 25 - 50; Fig 2, Col 4, lines 10-50; Col 6, lines 15 - 50; Fig 1, Col 3, lines 25-34; Portable Operating Unit 10 for each manipulator ), a casing surrounding the drive module ( Fig 1, Col 2, lines 23 -41 where each robot has its own control handle with respect to individual functions along placed in different location ), a power supply configured to supply power to the drive module and supply power to control movements of one of the at least two manipulators ( Fig 1, Col 4, lines 10 - 33; Col 4, lines 40- 46, Col 3, lines 25-50 ), and an axis computer configured to provide control signals to the drive unit based on the orders received from the main computer module ( Fig 1, Col 3, lines 25 - 50 ; Col 3, lines 60 - Col.4, lines 30 ) and a communication network operatively connecting the main computer module is adapted to communicate with the drive modules ( Fig 1, Col 3, lines 25 - 50 ; Col 3, lines 60 - Col 4, lines 30).

Stoddard et al does not show to plan movement paths, and to generate orders based on the movement paths, the main computer module comprising a casing surrounding the main computer module.

Ikeda et al shows plan movement paths (Fig 5, Fig 6; Col 4, lines 60 - Col 5, lines 50), and to generate orders based on the movement paths (Fig 7, Fig 8; Col 6, lines 5 - Col 7, lines 35), the main computer module comprising a casing surrounding the main computer module (Fig 1,150; Fig 2, 19 where the computer module enclosed by casing).

It would have been obvious for one of ordinary skill in the art to provide movement paths and orders based on movement paths as taught by Idea et al, to Stoddard et al, in order to provide a smooth running process while the industrial robot working under automated model.

As per claim 24, Stoddard et al shows the control system wherein the communication network comprises an Ethernet link (Col 3, lines 39-43; Col 4, lines 12 -15).

As per claim 28, Stoddard et al shows a method for controlling at least two at least two manipulators with a control system, the method comprising: transmitting with the main computer module the orders for the at least two manipulators to at least two physically separate drive modules ( Fig 1, Col 3, lines 25 - 50; Fig 2, Col 4, lines 10- 50; Col 6, lines 15 - 50; Fig 1, Col 3, lines 25-34 ); providing with an axis computer included in each of the at least two drive modules physically separate from each other and from the main computer module; control signals to the drive unit based-on the orders received from the main computer module (Fig 1, Col 3, lines 25 - 50; Fig 2, Col 4, lines 10-50; Col 6, lines 15 - 50; Fig 1, Col 3, lines 25- Col 4, lines 33 ); and driving and supplying power to motors of each of the at least two manipulators ( Fig 1, Col 4, lines 10 - 33; Col

4, lines 40- 46 ) with a drive unit included in each of the at least two physically separate drive modules to drive the movements of the at least two manipulators ( Fig 1, Col 2, lines 23 - 41; Col 4, lines 10-46; Col 3, lines 5 - Col 4, lines 5).

Ikeda et al shows plan movement paths (Fig 5, Fig 6; Col 4, lines 60 - Col 5, lines 50), and to generate orders based on the movement paths (Fig 7, Fig 8; Col 6, lines 5 - Col 7, lines 35), the main computer module comprising a casing surrounding the main computer module (Fig 1,150; Fig 2, 19 where the Computer module enclosed by casing).

It would have been obvious for one of ordinary skill in the art to provide movement paths and orders based on movement paths as taught by Ikeda et al, to Stoddard et al, in order to provide a smooth running process while the industrial robot working under automated mode.

**8.** Claims 26, 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stoddard et al (US Pat No 6697681) and further in view of Ikeda et al ( US Pat 6522949 ) and further in view of Matsumoto ( US Pat No 6587749).

As per claim 26, Stoddard et al does not shows transformer module comprising a transformer, a casing surrounding the transformer module and a power supply.

Matsumoto shows transformer module comprising a transformer and casing surrounding transformer module ( Col 2, lines 55 - 63; Col 3, lines 39-45; Fig 1, where voltage transformer 4, terminal block 5, switch 6 are surrounded by casing). Ikeda et al shows a casing for power supply (Fig 2, 19).

It would have been obvious for one of ordinary skill in the art to provide the casing for transformer

module and power supply as taught by Matsumoto and Ikeda et al, respectively, to Stoddard et al, in order to provide a safety protection for the electrical safety in the industrial working environment.

As per claim 27, Stoddard et al shows a control module comprising a control panel of the control system (Col 3, lines 60 - Col 4, lines 30; Col 4, lines 50 - Col 5, lines 15), Stoddard et al does not show a casing surrounding the control module, and a power supply.

Ikeda et al shows casing surrounding the control module, and a power supply (Fig 2, 15, 19).

It would have been obvious for one of ordinary skill in the art to provide the casing for transformer module and power supply as taught by Matsumoto and Ikeda et al, respectively, to Stoddard et al, in order to provide a safety protection for the electrical safety in the industrial working environment.

### ***Response to Arguments***

9. Applicant's arguments with respect to claims 15,23,24,28 have been considered but are moot in view of the new ground(s) of rejection.

10. Applicant states in the Remark that Stoddard et al does not show a main computer to control multiple manipulators, and multiple drive modules. Stoddard et al mainly exhibit a few main controllers connect to multiple manipulator with respect to each manipulator possess a hand operation device and individual sub controller in network connection.

***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Niedermayr (US Pat No 4611296) shows an industrial robot device.

Brantmark et al (US Pat No 4888708) shows a control system for industrial robot.

Tsuchihashi et al (US Pat No 5404290) shows an industrial robot manipulator.

Onoue et al (US Pat No 6218802) shows an industrial robot system.

Shimogama et al (US Pat No 6374156) shows a robot control system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ian Jen whose telephone number is 571-270-3274. The examiner can normally be reached on Monday - Friday 8:00-5:00 (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Khoi Tran can be reached on 571-272-6916. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like



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assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ian Jen/

Examiner, Art Unit 3664

/Khoi H Tran/

Supervisory Patent Examiner, Art Unit 3664